

**AMENDMENTS TO THE CLAIMS**

**Please amend the claims as set forth below.**

1. (Currently amended) A polarized total internal reflection illumination optical system by rotary annulus light in which a laser-beams-are beam is introduced into ~~the~~ an objective lens of a microscope at ~~the~~ a peripheral region, wherein the direction of illumination of ~~the~~ the laser-beams beam is rotatable and ~~the~~ illumination is performed using s-polarized light that ~~are~~ is perpendicular to ~~the~~ a radial direction from the center of optical axis of the objective lens at all times.
2. (Currently amended) ~~A~~ The polarized total internal reflection illumination optical system by rotary annulus light according to claim 1, featuring further including a drive means which rotates ~~the~~ a unit that ~~comprise~~ comprises a polarizer to adjust the direction of polarization of the laser-beams beam and a tiltable mirror to form annulus light, so that the direction of illumination of the laser beam is rotated.
3. (Currently amended) A polarized total internal reflection illumination optical system by rotary annulus light in which ~~the~~ a laser-beams beam from ~~the~~ a laser light source are expanded by a beam expander provided with a spatial filter such that ~~their~~ a laser beam diameter is- diameter is increased to up to one half the average diameter of the annulus, and thereafter which the expanded-beams-are beam is introduced into ~~the~~ a rotary polarizer and mirror unit, effectively eliminating the need for the use of an ~~annulus-diaphragm~~ annulus-diaphragm.
4. (Currently amended) ~~A~~ The polarized total internal reflection illumination optical system by rotary annulus light as stated in any one of Claims claims 1 through 3 in which the laser-beams ~~are~~ beam is introduced into the rotary polarizer and mirror unit via a small 45-degree mirror placed at the center of ~~the~~ a collector lens, and in which ~~the~~ an annulus parallel beams reflected from said polarizer and said mirror unit are collected at the back focal plane of ~~the~~ an objective

lens via a peripheral region of said collector lens.

5. (Currently amended) ~~A-~~ The polarized total internal reflection illumination optical system by rotary annulus light as stated in ~~Claim~~ claim 4 in which ~~a~~ an index pin is placed in front of the front focal plane of said collector lens ~~(i.e., near the field diaphragm plane)~~ and inserted at about the center of the optical axis to detect the period of rotation and direction of vibration of the rotating laser beams in ~~the~~ a visual field of ~~the~~ a microscope.